



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/532,255

04/21/2005

Friedrich Arnold

2002P01332WOUS

8408

46726

7590

07/13/2009

BSH HOME APPLIANCES CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
100 BOSCH BOULEVARD  
NEW BERN, NC 28562

EXAMINER

JIANG, CHEN WEN

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

07/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



<b>Office Action Summary</b>	<b>Application No.</b> 10/532,255	<b>Applicant(s)</b> ARNOLD ET AL.	
	<b>Examiner</b> Chen-Wen Jiang	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-32 is/are pending in the application.
- 4a) Of the above claim(s) 25, 26 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 and 27-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |



Art Unit: 3744

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan (U.S. Patent Number 5,004,355) in view of Takahashi (JP 59230128).

In regard to claims 13, 17 and 27, Ryan teaches forming a unit 10 from a thermometer 12 having temperature sensitive element 16 and a thermal buffer liquid 32 in a substantially transparent container 20 (Figs. 1 and 2); placing the unit container at a site to be monitored inside the refrigerator (C-3, L-4-7); visually observing a temperature variable property of said temperature sensitive element to determine if the temperature in the refrigerator is at, below or above a predetermined temperature range (C-3, L-43-47). The temperature sensitive element 16 is in non-insulated contact with the buffer liquid 32 and the observation of the temperature on indicia



Art Unit: 3744

18. Ryan discloses the invention substantially as claimed. However, Ryan does not disclose observing temperature sensitive element to determine temperature in the refrigerator. Takahashi discloses observing temperature sensitive element to determine temperature in the same field of endeavor for the purpose of measuring temperature. The bodies 4 have different substantially discrete values of a property which can be visually observed of at least one of above or below a temperature limit to be monitored (Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the temperature sensitive element of Ryan with the one disclosed by Takahashi so as to have simple substitution.

In regard to claim 15, Ryan teaches the thermal buffer liquid comprising water (C-2, L-60-63).

In regard to claim 19, Ryan teaches that the temperature sensitive element 16 is located inside said container 20 and the substitution of Takahashi's thermometer to locate inside of the container to make the temperature sensitive element can swim in the container.

In regard to claim 14, Ryan teaches most of the limitations of the claim but does not explicitly teach selecting the quantity of thermal buffer so that temperature equalization of the unit and the refrigerator requires at least about one hour. However, Ryan teaches that the container is liquid which will not have momentary fluctuation in the temperature (C-2, L-67 to C-3, L7). One having ordinary skill in the art would know how to adjust the equalization temperature by the quantity of the liquid through experimental procedures. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the quantity of thermal buffer so that temperature equalization of the unit and the



Art Unit: 3744

refrigerator requires at least about one hour in order advantageously give more precise temperature readings regarding to the articles in the refrigerator.

In regard to claim 18, Ryan teaches a container 20 but does not explicitly teach the capacity of the container. Since the containers come in variety of sizes and capacities, than it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a container capacity in the range of about fifty to two hundred and fifty cubic meters for the suitability of the experimental procedure in order to advantageously adjust the temperature equalization time to desired level.

In regard to claim 31, Ryan/Takahashi teaches most of the limitations of the claim but does not explicitly teach that the temperature sensitive element is in the form of a fish. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the body of the temperature sensitive element in the form of a fish in order to advantageously achieve a device that is capable of floating in water or submerge under water while eliminating or reducing drag force on the device. The specification of this application also states that the form of the temperature sensitive element can be any shape (page 6, lines 31-32), and thus, there is no criticality in the shape of the temperature sensitive element.

In regard to claim 16, the temperature sensitive elements disclosed by Takahashi do not require any external energy supply.

In regard to claim 20, Takahashi teaches that the temperature sensitive element has different substantially discrete values of a property which can be visually observed of at least one of above or below a temperature limit to be monitored (Abstract).



Art Unit: 3744

In regard to claim 21, the property changes its value in a certain temperature range is a design choice based on the temperature criteria for the storage; e.g.; Witonsky et al. teach the property changes its value in a temperature range of about 7 and 10 degrees Celsius above the temperature limit (Fig.2).

In regard to claims 22 and 28, Takahashi teaches that the property is the color of at least one portion of the temperature sensitive element (Abstract).

3. Claims 23, 24, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan/Takahashi as applied to claims 17, 20, 27 and 28 above, and further in view of Witonsky et al. (2003/0147450).

Ryan/Takahashi discloses the invention substantially as claimed. However, Jones/Takahashi does not disclose different portions with different properties. Witonsky et al. discloses that the separate portions with different properties are separate colors with different temperature limits for said property changes (Fig. 2; 0022, lines 5-9; 0032, lines 9-14). The temperature sensitive properties are material composition dependent. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Ryan/Takahashi with a multiple properties in view of Witonsky et al. so as to indicate the temperature changes.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



Art Unit: 3744

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chen-Wen Jiang/  
Primary Examiner, Art Unit 3744